Preface

The National Marine Fisheries Service (NMFS) is the agency responsible for the science-based conservation and management of the Nation's living marine resources and their environment. NMFS is part of the National Oceanic and Atmospheric Administration (NOAA) within the Department of Commerce. The agency's long-term commitment to scientific excellence via internal and external peer-reviewed scientific journals has materially advanced marine science and policy for over 125 years.

Since 1871, Federal fisheries scientists have collected, researched, analyzed, and published peer-reviewed data on the Nation's living marine resources, marine ecosystems, and the benefits that they provide. Recently, NMFS has instituted a science quality assurance program to consistently monitor and review NMFS research efforts to ensure that they are of the highest quality. Further, this program identifies gaps in infrastructure, facilities, and resources that are affecting the productivity of NMFS scientists. Under this scrutiny, important agency findings are published in many highly respected journals.

NMFS has established the position of Scientific Editor as well as the Scientific Publications Office (SPO) to ensure the editorial and scientific integrity of its research products. These and other regional NMFS publication materials serve as the basis for agency scientific reports, regulatory documents, and technical presentations to fishery managers, industry and environmental groups, the information community (media), and to the public and scientific community. Thus, the agency's comprehensive scientific research and publishing efforts provide the foundation for developing sound policies that govern the use, protection, restoration, and conservation of living marine resources, marine habitats, and other aquatic environments.

This document builds upon elements of previous significant planning initiatives from both NMFS and NOAA:

NOAA Strategic Plan: A Vision for 2005
First released in 1993, this agency-wide Strategic Plan broadly covers all the major programs and missions underneath NOAA and how they contribute to the goal of bringing scientific information to bear on key societal decisions. This Plan has evolved over time in response to emerging issues and developing programs. The executive summary of the latest edition of this Plan is available from the NOAA Web site at *www.strategic.noaa.gov.*

Results of the Review of the NOAA Science Enterprise by the NOAA Chief Scientist
Released in 1995, this comprehensive review examined the quality of NOAA research with respect to its methodological approaches, the relevancy and adequacy of its science activities, and the strength and value of partnerships between NOAA's programs and outside groups.

NOAA Fisheries Strategic Plan
In 1997, NMFS published this Plan after extraordinary public involvement, including 12 public meetings. The Plan describes specific NMFS objectives and performance measures to fulfill all aspects of its stewardship mission through a rational, scientific approach. This Plan continues to serve as an outline to guide the agency and is available from the NMFS Web site at *www.nmfs.noaa.gov/om2/contents.html*.

NMFS Strategic Plan for Fisheries Research (1998)
Released in 1998 as a requirement of the Sustainable Fisheries Act of 1996, this original Plan was purposely framed to be consistent with previous planning initiatives, yet with a more detailed focus on NMFS research activities. In particular, the Plan functions as a subset of the *NOAA Fisheries Strategic Plan*. Many of the objectives found under the "Major Fishery Research Goals and Objectives" section of this Plan (and this update) generally can be matched with strategies in the *NOAA Fisheries Strategic Plan*. The 1998 *NMFS Strategic Plan for Fisheries Research* is available for download at the NMFS Web site at *www.nmfs.noaa.gov/sfa/stratpln.pdf*.

NOAA Fisheries Data Acquisition Plan
Released in September 1998, this document represents a five-year strategy for meeting NMFS' rapidly growing at-sea data requirements. The Plan provides an overview of the existing data acquisition program, describes anticipated growth and changes to data requirements in the future, details options available, and presents a suite of recommendations for meeting these challenges, including the construction of a fleet of modern Fisheries Research Vessels. Recommendations from the Plan have become the basis for budget decisions relative to the acquisition of at-sea data. This Plan is available from the NMFS Web site at *www.st.nmfs.gov/st2/omb_link.html*.

In addition to the above internal planning documents, this Plan supports and incorporates the following external reviews by the National Research Council (NRC):

Improving Fish Stock Assessments
Published in 1998, this report commissioned by NMFS reviews the agency's current stock assessment methods and models and makes recommendations for alternative approaches. The objective of the review was to produce an authoritative report that documented the strengths and limitations of stock assessment methods relative to the diversity of available data and types of fisheries management systems. The report can be read online or purchased at the National Academy Press Web site at *www.nap.edu*.

Sustaining Marine Fisheries
Published in 1999, this NRC commissioned report explores the nature of marine ecosystems and the complex interacting factors that shape their productivity. The book documents the condition of marine fisheries in 1999, highlighting species and geographic areas that were under particular stress. Challenges to achieving sustainability are discussed, and short-

comings of existing fisheries management and regulation are examined. The report calls for fisheries management to adopt a broader ecosystem perspective that encompasses all relevant environmental and human influences. It can be read online or purchased at the National Academy Press Web site at *www.nap.edu.*

Improving the Collection, Management, and Use of Marine Fisheries Data
Published in 2000, this NRC commissioned report assesses methods for improving data for stock assessments and fisheries management. The summer flounder fishery was used as a case study in this report because it supported a fishery that spanned state and Federal waters over a vast geographic area, both recreational and commercial fishermen targeted the species, and there was an abundance of data available for assessments. The report analyzed summer flounder stock assessments and the implicit and explicit modeling assumptions that affected modeling outcomes. The study also examined data collection and use and made 40 recommendations to Federal and state fishery agencies, Congress, regional councils, interstate commissions, and commercial and recreational fishermen, with the objective of improving fisheries data and management. This report can be read online or purchased at the National Academy Press Web site at *www.nap.edu.*

Marine Protected Areas: Tools for sustaining ocean ecosystems
Published in 2001, this NOAA commissioned report evaluates marine protected areas (MPAs) as a tool to supplement conventional fishery management. The report recommended networks of MPAs, some for fishery management, embedded within broadly zoned management areas in the coastal ocean. Additionally, the study indicated that the basic knowledge gained through monitoring and evaluation of MPAs on the structure, function, and variability in marine ecosystems would enhance the design of reserves and allow more accurate evaluations of their ecological and socioeconomic consequences. Reserves would also allow more accurate estimation of parameters such as natural mortality rates—an essential variable in stock assessment models. This report can be read online or purchased at the National Academy Press Web site at *www.nap.edu.*

The scope of the present document includes fisheries, habitat, and protected species research that solely addresses requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). It does not include the regulatory and enforcement components of the NMFS mission. NMFS conducts a comprehensive program of fisheries research and peer-reviewed publishing to make information available to industry, environmental groups, resource managers, and others who are dependent on fisheries science. This Plan, which updates the original *Strategic Plan for Fisheries Research* released in 1998, covers what we do now and how we expect to improve.

The research plans of NMFS are developed in constant communication with our partners and constituents. NMFS research programs are periodically reviewed by informal and formal program reviews. NMFS scientists serve on Fishery Manage-

National Marine Fisheries Service Mission Statement:

Stewardship of living marine resources for the benefit of the Nation through their science-based conservation and management and promotion of the health of their environment.

ment Council Scientific Steering Committees where research inadequacies are identified and then addressed through NMFS programs. Regulatory and judicial proceedings also identify information needs that are then incorporated in the research program. U.S. and international scientists work together to identify means to fill information gaps needed to manage both U.S. and high-seas fisheries of interest to the American public and industries. In all respects, this Plan is the ultimate integration of the broad fisheries research needs of American society and its legislative, executive, and judicial institutions.